

## Global Satellite Coalition Position: 28 GHz Band (27.5-29.5 GHz)

**Overview:** Today, Ka-band satellites provide broadband connectivity to those that otherwise would not have it, and offer a competitive alternative to those with limited broadband choices. Satellite-delivered broadband service is a success story made possible by decades-old decisions to safeguard satellite's unique role in the broadband revolution by providing satellite access to the Ka-band portion of the radio spectrum. Based on Ka-band spectrum access certainty, the satellite industry has invested in and deployed into orbit over one hundred commercial Ka-band satellites, with many more in development and construction, set for launches soon. Satellite broadband networks may be the only way of affordably connecting many economically challenged people in both urban and rural areas. The 28 GHz (27.5-29.5 GHz) portion of the Ka band is part of the core satellite spectrum used today to deliver broadband globally and its deployment and use are expanding rapidly.

Even as satellite networks are increasingly providing critical services with ubiquitous coverage using the 28 GHz band, the terrestrial wireless industry is seeking to repurpose that spectrum for future terrestrial 5G networks, despite the availability of other, more appropriate, spectrum. If governments bypass the international process, and restrict or relocate satellite use from all or part of the Ka band, in favor of IMT-2020 terrestrial 5G radio interface technologies, this will only increase the digital divide.

Further, such an approach would ignore a decision at the 2015 ITU World Radiocommunication Conference (WRC-15) where world governments resoundingly: (i) declined to consider studying the introduction of terrestrial 5G in the 28 GHz band; (ii) reaffirmed the critical need for satellite communications in the 28 GHz band; and (iii) further proposed expanding use of the 28 GHz band for satellite broadband service to airplanes, buses, trucks, trains, cars and ships – i.e. Earth Stations in Motion (ESIMs). What led countries at WRC-15 to study expanded satellite broadband use of the 28 GHz band to bridge the digital divide remains true today, as satellite broadband continues to expand its ability to provide broadband service to users across the globe, no matter their locations. In recognition of this, the CEPT has taken a position in its 5G Roadmap to set aside the 28 GHz band for satellite broadband and state clearly that 'this band is therefore not available for 5G'.

As a result of the consistent, longstanding regulatory decision to make the 28 GHz band available for use by satellite networks, the satellite industry has invested tens of billions of dollars in satellites and other critical infrastructure that rely on the 28 GHz band. These include launch and manufacturing facilities, Internet gateways and other ground infrastructure, and the devices that connect residential and mobile consumers, businesses, and government users worldwide. Because of that investment, hundreds of millions of satellite broadband connections now help citizens build nations and societies, as well as support countless high-paying jobs and increase national GDPs.

**The GSC recommends** that administrations ensure that satellite networks have full access to the 2 GHz of spectrum and operational flexibility in the 28 GHz band spectrum to provide ubiquitous fixed and mobile satellite broadband services, as these satellite operations are key to narrowing the digital divide. In addition, administrations should not identify the band for terrestrial 5G on a national or international basis, as studies have shown that terrestrial 5G is incompatible with satellite services in the same band. Moreover, there are vast amounts of spectrum already available or expected to be made available for terrestrial IMT/5G in low, mid, and high bands, outside the 28 GHz band. The 28 GHz band must continue to be made available for satellite broadband use. This frequency band supports satellite networks that provide critical broadband connectivity across the globe and are key enablers to meet the United Nations' broadband Sustainable Development Goals and its Broadband Commission for Sustainable Development's "Targets 2025", which support "Connecting the Other Half" of the world's population<sup>1</sup>.

<sup>1</sup> <https://www.broadbandcommission.org/about/Pages/default.aspx>